TALLRec: An Effective and Efficient Tuning Framework to Align Large Language Model with Recommendation

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Abstract

Large Language Models (LLMs) have demonstrated remarkable performance across diverse domains, thereby prompting researchers to explore their potential for use in recommendation systems. Initial attempts have leveraged the exceptional capabilities of LLMs, such as rich knowledge and strong generalization through In-context Learning, which involves phrasing the recommendation task as prompts. Nevertheless, the performance of LLMs in recommendation tasks remains suboptimal due to a substantial disparity between the training tasks for LLMs and recommendation tasks, as well as inadequate recommendation data during pre-training. To bridge the gap, we consider building a Large Recommendation Language Model by tunning LLMs with recommendation data. To this end, we propose an efficient and effective Tuning framework for Aligning LLMs with Recommendations, namely TALLRec. We have demonstrated that the proposed TALLRec framework can significantly enhance the recommendation capabilities of LLMs in the movie and book domains, even with a limited dataset of fewer than 100 samples. Additionally, the proposed framework is highly efficient and can be executed on a single RTX 3090 with LLaMA-7B. Furthermore, the fine-tuned LLM exhibits robust cross-domain generalization. Our code and data are available at https://github.com/SAI990323/TALLRec.